Marine Mammals

Īlio-holo-i-ka-uaua or Hawaiian monk seal

Monachus schauinslandi

SPECIES STATUS:
Federally Listed as Endangered
State Listed as Endangered
State recognized as Indigenous
IUCN Red List – Endangered
Endemic

SPECIES INFORMATION: Īlio-holo-i-ka-uaua or Hawaiian monk seal (*Monachus schauinslandi*) feed on reef fishes, octopus, squid, and lobsters over many substrates up to depths of 305 meters (1000 feet). They have been known to feed in benthic habitats to 500 meters and on coral beds below 300 m. Juveniles feed on a higher proportion of nocturnal fish species. Food seems to be a limiting factor for population growth at this time. Īlio-holo-i-ka-uaua are usually solitary except when on preferred beaches when they may be close together and interact. Mating occurs in the spring and early summer. Gestation is approximately one year. Pupping occurs in late winter and spring. Weaning lasts five to six weeks, happening in late spring, and pups and moms stay ashore until weaned. Foster parenting occurs. Most females only mate every other year, with one third or so breeding in consecutive years. Females and males reach sexual maturity at around five to nine years of age, and earliest is at Laysan. They are the only endangered marine mammal that occurs exclusively within the United States. Īlio-holo-i-ka-uaua live to 20 to 25 years of age.

DISTRIBUTION: Occurs in all of the Hawaiian Islands, although the majority of the population and pupping occurs in the middle of the Northwestern Hawaiian Islands (NWHI) chain. Pupping has recently been recorded from all the Main Hawaiian Islands. Some individuals and one birth have occurred at Johnston Atoll and 20 individuals have been translocated there.

ABUNDANCE: Currently, abundance is estimated at about 1,300 individuals. About 50 individuals have been identified in the main islands, which is a large increase from more than 10 years ago. Populations have been decreasing recently, especially in the population around French Frigate Shoals.

LOCATION AND CONDITION OF KEY HABITAT: There are six main breeding sites in the NWHI (French Frigate Shoals, Laysan and Lisianski Islands, Pearl and Hermes Reef, and Kure and Midway Atolls). The loss of some islands in the NWHI, possibly due to sea level rise and

climate change, may be hurting reproduction. Critical habitat has been defined under the U. S. Endangered Species Act as all waters out to 20 fathoms of depth and beaches (including sand spits and islets) and beach vegetation to its deepest inland extent around the six breeding sites plus Maro Reef, Gardner Pinnacle, Necker, and Nihoa Islands. The only exceptions are Sand Island and the harbor at Midway Atoll. Feeding occurs both within the atoll lagoon systems and on the reef slope outside the reef crest within 200 kilometers (124 miles) of the islands or atoll systems. They also forage on the submarine ridges connecting the atoll systems and on the seamounts of the NWHI area. Terrestrial habitat is used about one-third of the time and requirements there include haul-out areas for pupping, nursing, and resting, primarily on sandy beaches, but virtually all substrates are used. Beachside vegetation is used for protection from wind and rain.

THREATS:

- Historically, capture by humans and disturbance from government installations in the NWHI were major threats;
- Loss of marine and terrestrial habitat;
- Conflicts with commercial fishing also occurred but recent regulations limiting longline fishing near the NWHI has decreased this problem there;
- Hooking and entanglement occur in the main islands' gill net and ulua slide-bait fisheries;
- Entanglement from marine debris is a major threat;
- Storms and climate change has resulted in a loss of pupping islands;
- Disease threats included canine distemper, Leptospirosis, and Brucellosis. A non-native elephant seal was removed from Hawaiian waters to decrease the possibility of canine distemper being introduced to monk seal populations;
- Biotoxins, specifically ciguatoxin and contaminants;
- Predation by some sharks appears to have focused on seal pups causing increased mortality;
- Male aggression towards females and pups;
- Human disturbance, especially of mothers with calves, may be a threat. Conflicts and interactions with a variety of ocean and beach users are becoming more frequent and significant in the main islands;
- Other threats. There is low pup survival rate at French Frigate Shoals which appears to be associated with poor feeding but the exact cause of the problems there are unclear. Low genetic variability could threaten or make more difficult long-term conservation of the species. Limited food availability may affect pup and adult survival rates. Ship groundings pose hazards through oil spills, fishing gear, and effects to their prey base.

CONSERVATION ACTIONS: The goals of conservation actions are to not only protect current populations, but to also establish further populations to reduce the risk of extinction. Some conservation is in place in the five Fishery Management Plans of the Western Pacific Fisheries Management Council. Other protections result from the reduction in fishing from the Executive Order creating the NWHI Coral Reef Ecosystem Reserve within 50 miles (80

kilometers) of the atolls and islands. Detailed recommendations are made in the Recovery Plan. In addition to common state-wide, marine, and NWHI conservation actions, specific actions include:

- Use the Incidental Take Permit process to minimize fishery interactions in the Main Hawaiian Islands;
- Decrease likelihood and impacts of human disturbance;
- Improve survivorship of females of all ages, juveniles, yearlings in subpopulations in NWHI;
- Continued restoration and protection of habitat and prey base;
- Continued removal of beach and reef marine debris in the NWHI;
- Continue removal of sharks that cause significant predation of pups;
- Expand efforts to reduce the probability of the inadvertent introduction of infectious diseases into the seal population;
- Continue and expand education and outreach programs and better coordinate these efforts;
- "Head starting" of juveniles may need to be reconsidered;
- Translocation of problem males and pups from low survival areas to bolster other subpopulations could be continued as needed;
- Maintain current field presence in NWHI to monitor and manage the seal population;
- Ensure continued growth of the main islands population through conservation actions and especially increased coordination among agencies and stakeholders.

MONITORING:

- Continue surveys of population and distribution in known and likely habitats;
- Optimize pup tagging and adult identification program.

RESEARCH PRIORITIES:

- Improve understanding of basic biology and ecology to improve survival and population growth;
- Research causes of low juvenile survival;
- Continue habitat use and diet/prey studies.

References:

Earth Tech, Inc. 2005. Preliminary draft EIS: Issuance of an ESA Incidental Take Permit to the state of Hawaii. Honolulu, HI.

National Marine Fisheries Service. 2004. Recovery plan for the Hawaiian monk seal (*Monachus schauinslandi*). Silver Spring, MD: National Marine Fisheries Service. 142 pp.

NatureServe. 2005. NatureServe Explorer: An online encyclopedia of life [web application]. Version 4.3. Arlington, Virginia: NatureServe. Available from: http://www.natureserve.org/explorer.

U. S. Department of Commerce. 1988. Critical Habitat, Hawaiian Monk Seal; Endangered Species Act. Federal Register 53(102): 18988-18996.

National Marine Fisheries Service. 2004. Recovery Plan for the Hawaiian Monk Seal (*Monachus schauinslandi*). Silver Spring, MD: National Marine Fisheries Service. 148pp.